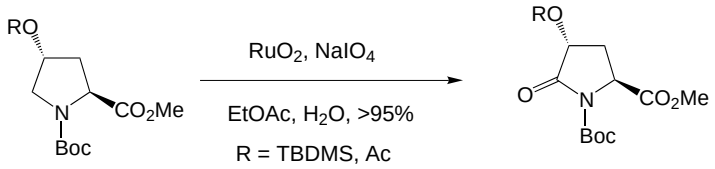
A convenient and high yield method to prepare 4-hydroxypyroglutamic acids

Tetrahedron Letters 42 (2001) 5335

Xiaojun Zhang,* Aaron C. Schmitt and Wen Jiang

Chemical & Physical Sciences, DuPont Pharmaceuticals Company, Experimental Station, PO Box 80500, Wilmington, DE 19880, USA

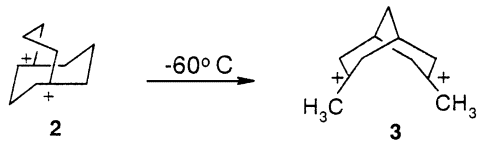


A deepseated carbodication rearrangement. Limited paths because of charge repulsion

Tetrahedron Letters 42 (2001) 5339

Christoph Taeschler and Ted S. Sorensen*

Department of Chemistry, University of Calgary, Calgary, Alberta, Canada, T2N 1N4

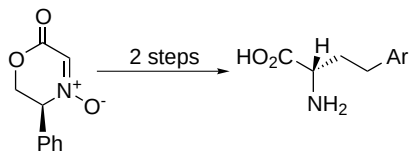


Enantioselective syntheses of homophenylalanine derivatives via nitrone 1,3-dipolar cycloaddition reactions with styrenes

Tetrahedron Letters 42 (2001) 5343

Alan Long and Steven W. Baldwin*

Paul M. Gross Chemical Laboratory, Department of Chemistry, Duke University, Durham, NC 27708-0346, USA

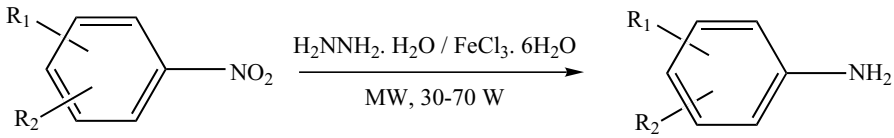


Solvent-free reduction of aromatic nitro compounds with alumina-supported hydrazine under microwave irradiation

Tetrahedron Letters 42 (2001) 5347

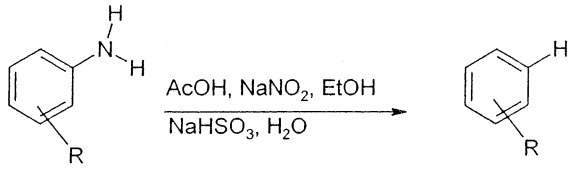
András Vass,[a] József Dudás,[a] Judit Tóth[a] and Rajender S. Varma[b,*]

[a]*Research Institute of Chemical and Process Engineering, University of Kaposvar, H-8200, Veszprém, Egyetem u.2, Hungary*
[b]*Clean Processes Branch, National Risk Management Research Laboratory, U.S. Environmental Protection Agency, MS 443, 26 W. Martin Luther King Drive, Cincinnati, OH 45268, USA*

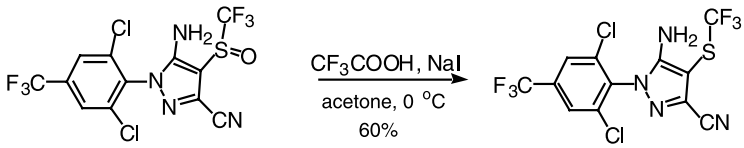


Where R_1=R_2=H, OH, OCH_3, CH_3, Cl, I, NH_2, etc.

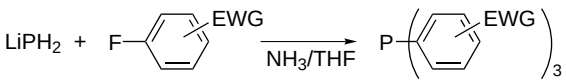
[a]*Department of Pharmaceutical Sciences, Medical University of South Carolina, Charleston, SC 29425, USA*
[b]*Department of Cell and Molecular Pharmacology and Experimental Therapeutics, Medical University of South Carolina, Charleston, SC 29425, USA*



[a]*Department of Medicinal Chemistry, University of Mississippi, MS 38677, USA*
[b]*Research Institute of Pharmaceutical Sciences, University of Mississippi, MS 38677, USA*
[c]*Department of Environmental Sciences, University of California, Riverside, Riverside, CA 92521 USA*



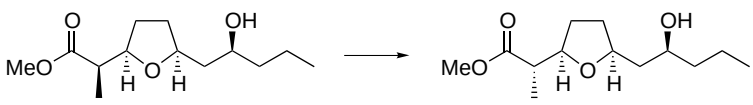
Center for Bio/Molecular Science and Engineering, Code 6950, U.S. Naval Research Laboratory, 4555 Overlook Avenue, SW, Washington, DC 20375-5348, USA



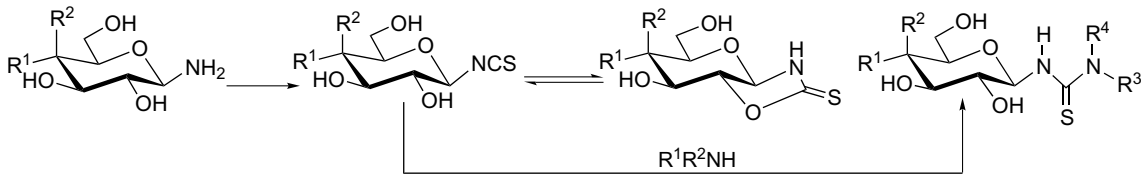
EWG = $P(O)(NR_2)_2$, SO_2NEt_2, CN, oxazolyl

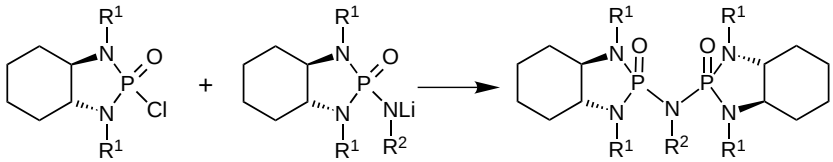
[a]*Institut für Organische Chemie, Technische Universität Dresden, Mommsenstraße 13, D-01062 Dresden, Germany*
[b]*Organisch-Chemisches Institut, Universität Münster, Corrensstraße 40, D-48149 Münster, Germany*

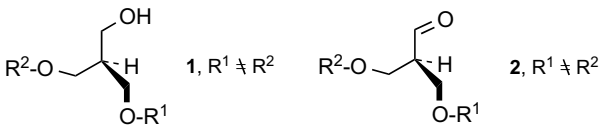
Methyl ester **2** of the title compound was prepared from **1** by a three-step route involving Yamaguchi lactonization with concomitant C(2) epimerization as well as by one-step C(2) epimerization of **1**.

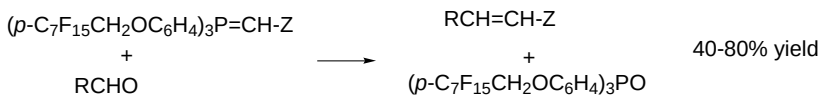


1 **2**









Z = CO_2Et, CN; R = C_6H_5, *p*-$CH_3OC_6H_4$, *p*-$NO_2C_6H_4$, *o*-$CH_3C_6H_4$, C_6H_{12}

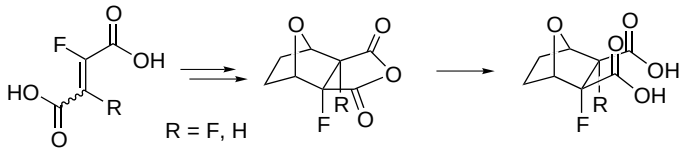
Synthesis of the first fluorinated cantharidin analogues

Tetrahedron Letters 42 (2001) 5429

Michael Essers, Birgit Wibbeling and Günter Haufe*

Organisch-Chemisches Institut, Westfälische Wilhelms-Universität Münster, Corrensstrasse 40, D-48149 Münster, Germany

Fluorinated cantharidin analogues have been synthesized for the first time. The key step in each synthesis is an *exo*-selective Diels–Alder reaction of furan with the appropriate fluorinated maleic anhydride. ^{17}O NMR measurements of the new substances and the non-fluorinated parent compounds were undertaken to show the influence of the fluorine substituent(s) on the electronic properties of the oxygen atoms.

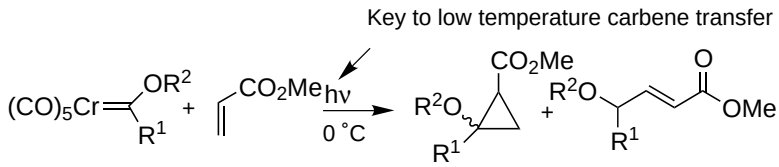


Low temperature carbene transfer from alkoxychromium(0) (Fischer) carbene complexes

Tetrahedron Letters 42 (2001) 5435

Miguel A. Sierra,* Juan C. del Amo, María J. Mancheño and Mar Gómez-Gallego

Departamento de Química Orgánica, Facultad de Química, Universidad Complutense, 28040 Madrid, Spain

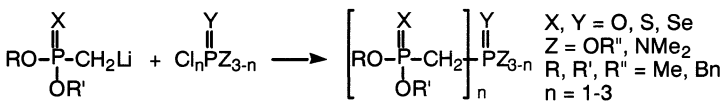


Selenophosphonates as building blocks for the preparation of bis-methylene analogs of triphosphates

Tetrahedron Letters 42 (2001) 5439

Stéphane Mons, Emmanuel Klein, Charles Mioskowski* and Luc Lebeau*

Université Louis Pasteur de Strasbourg, Laboratoire de Synthèse Bioorganique associé au CNRS, Faculté de Pharmacie, 74, route du Rhin-BP 24-67 401 Illkirch, France

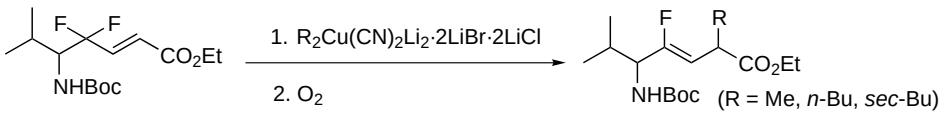


New access to α-substituted (*Z*)-fluoroalkene dipeptide isosteres utilizing organocopper reagents under 'reduction–oxidative alkylation (R-OA)' conditions

Tetrahedron Letters 42 (2001) 5443

Akira Otaka,* Hideaki Watanabe, Akira Yukimasa, Shinya Oishi, Hirokazu Tamamura and Nobutaka Fujii

Graduate School of Pharmaceutical Sciences, Kyoto University, Sakyo-ku, Kyoto 606-8501, Japan

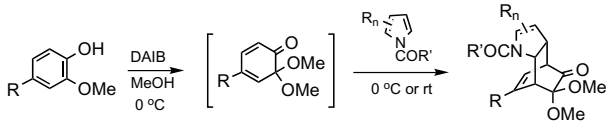


Highly selective and facile Diels–Alder reactions of masked *o*-benzoquinones with pyrroles

Tetrahedron Letters 42 (2001) 5481

Ming-Fang Hsieh, Rama Krishna Peddinti and Chun-Chen Liao*

Department of Chemistry, National Tsing Hua University, Hsinchu 300, Taiwan

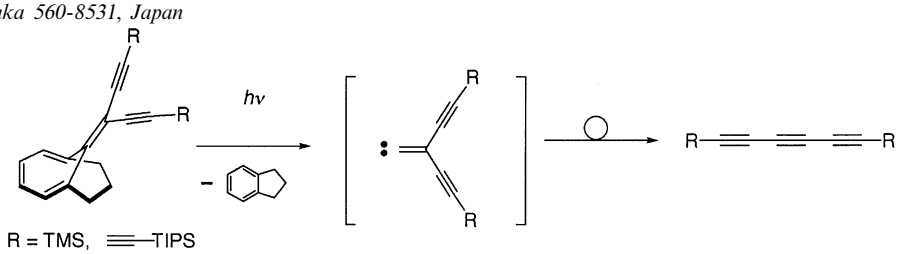


Vinylidene to alkyne rearrangement to form polyynes: synthesis and photolysis of dialkynylmethylenebicyclo[4.3.1]deca-1,3,5-triene derivatives

Tetrahedron Letters 42 (2001) 5485

Yoshito Tobe,* Naruhito Iwasa, Rui Umeda and Motohiro Sonoda

Department of Chemistry, Faculty of Engineering Science, Osaka University, and CREST, Japan Science and Technology Corporation (JST), Toyonaka, Osaka 560-8531, Japan



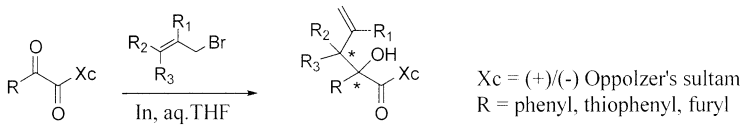
Indium-mediated diastereoselective allylation reactions: preparation of *tert*-α-hydroxy acids

Tetrahedron Letters 42 (2001) 5489

Jeong Ah Shin,[a,b] Joo Hwan Cha,[a] Ae Nim Pae,[a] Kyung Il Choi,[a] Hun Yeong Koh,[a] Han-Young Kang[b,*] and Yong Seo Cho[a,*]

[a]*Biochemicals Research Center, Korea Institute of Science and Technology, PO Box 131, Cheongryang, Seoul 130-650, South Korea*

[b]*Department of Chemistry, Chungbuk National University, Cheongju, Chungbuk 361-763, South Korea*



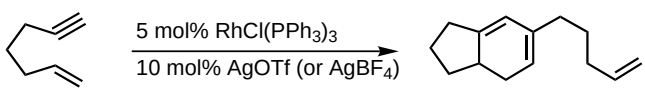
Rhodium catalyzed [2+2+2] cyclizations of 1,6-enynes

Tetrahedron Letters 42 (2001) 5493

Chang Ho Oh,* Hye Rhyan Sung, Seung Hyun Jung and Young Mook Lim

Department of Chemistry, Hanyang University, Sungdong-Gu, Seoul 133-791, South Korea

1,6-Enynes in the presence of 5 mol% $RhCl(PPh_3)_3$ and 10 mol% Ag(I) salts underwent [2+2+2]-cyclizations to give cyclohexadienes in good to excellent yields.



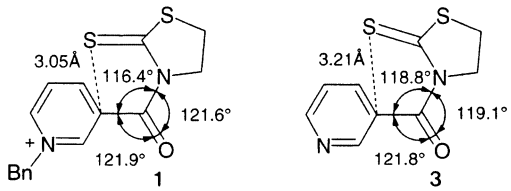
1a-g **3a-g** (60-89%)

Tetrahedron Letters 42 (2001) 5497

Intra- and intermolecular interactions between a thiocarbonyl group and a pyridinium nucleus

Shinji Yamada* and Tomoko Misono

Department of Chemistry, Faculty of Science, Ochanomizu University, Bunkyo-ku, Tokyo 112-8610, Japan

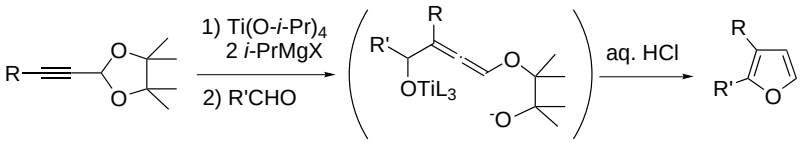


Tetrahedron Letters 42 (2001) 5501

One-pot preparation of 2-substituted and 2,3-disubstituted furans from 2-alkynal tetramethylethylene acetals and aldehydes using a divalent titanium reagent Ti(O-*i*-Pr)$_4$/2 *i*-PrMgX

Xin Teng, Takeshi Wada, Sentaro Okamoto and Fumie Sato*

Department of Biomolecular Engineering, Tokyo Institute of Technology, 4259 Nagatsuta-cho, Midori-ku, Yokohama, Kanagawa 226-8501, Japan



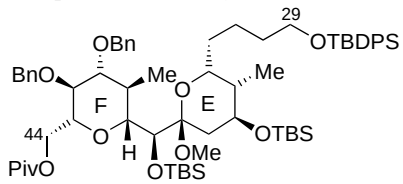
Tetrahedron Letters 42 (2001) 5505

Synthetic studies on altohyrtins (spongistatins): synthesis of the C29–C44 (EF) portion

Takeshi Terauchi, Masataka Morita, Kyoko Kimijima, Yasuhiro Nakamura, Gouichirou Hayashi, Taisaku Tanaka, Naoki Kanoh and Masaya Nakata*

Department of Applied Chemistry, Faculty of Science and Technology, Keio University, 3-14-1 Hiyoshi, Kohoku-ku, Yokohama 223-8522, Japan

Convergent synthesis of the C29–C44 (EF) portion of altohyrtins is described.

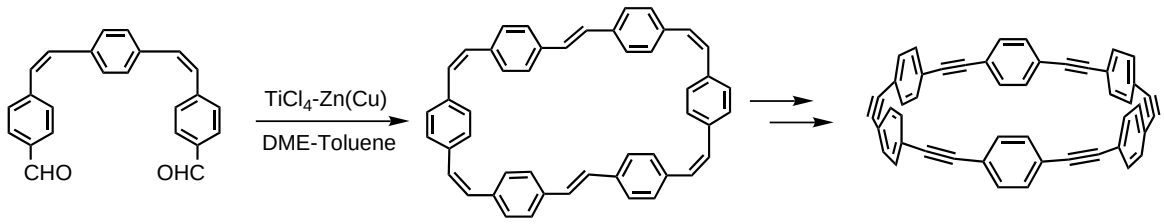


Tetrahedron Letters 42 (2001) 5509

The newly modified McMurry reaction toward the improved synthesis of cyclic paraphenylacetylenes

Takeshi Kawase, Noriko Ueda, Kenji Tanaka, Yohko Seirai and Masaji Oda*

Department of Chemistry, Graduate School of Science, Osaka University, Toyonaka 560-0043, Japan



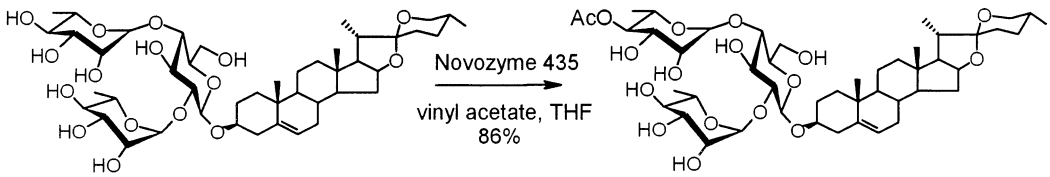
Lipase-catalyzed regioselective acylation of diosgenyl saponins

Tetrahedron Letters 42 (2001) 5513

Biao Yu,[a,*] Guowen Xing,[a] Yongzheng Hui[a,*] and Xiuwen Han[b]

[a]*State Key Laboratory of Bio-organic and Natural Products Chemistry, Shanghai Institute of Organic Chemistry, Chinese Academy of Sciences, Shanghai 200032, China*

[b]*State Key Laboratory of Catalysis, Dalian Institute of Chemical Physics, Chinese Academy of Sciences, Dalian 116023, China*



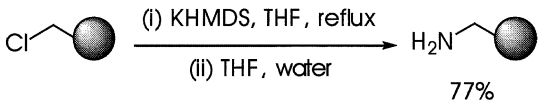
Non-nucleophilic base (KHMDS) mediated nucleophilic conversion of Merrifield resin into aminomethyl resin

Tetrahedron Letters 42 (2001) 5517

David F. J. Sampson,[a] Robin G. Simmonds[b] and Mark Bradley[a,*]

[a]*Dept. of Chemistry, The University of Southampton, Southampton, Hampshire SO17 1BJ, UK*

[b]*Eli Lilly & Co., Lilly Research Centre, Erl Wood Manor, Windlesham, Surrey GU20 6PH, UK*



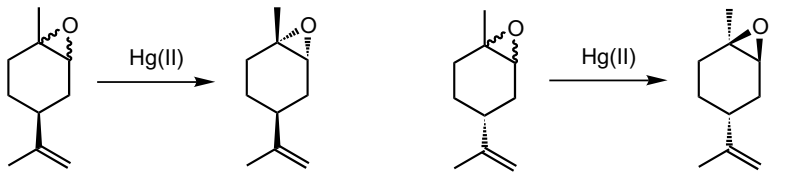
Resolution of limonene 1,2-epoxide diastereomers by mercury(II) ions

Tetrahedron Letters 42 (2001) 5521

Mariët J. van der Werf,[a] Hugo Jongejan[b] and Maurice C. R. Franssen[b,*]

[a]*Department of Applied Microbiology and Gene Technology, TNO Nutrition and Food Research, PO Box 360, 3700 AJ Zeist, The Netherlands*

[b]*Laboratory of Organic Chemistry, Wageningen University, Dreijenplein 8, 6703 HB Wageningen, The Netherlands*



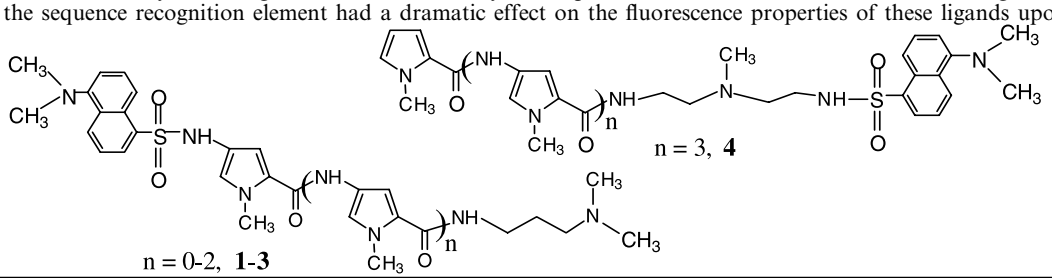
Facile synthesis of novel fluorescent distamycin analogues

Tetrahedron Letters 42 (2001) 5525

Santanu Bhattacharya* and Mini Thomas

Department of Organic Chemistry, Indian Institute of Science, Bangalore 560 012, India

A facile synthesis of four distamycin analogues that bear the dansyl fluorophore is described. The nature of the linkage between the fluorophore and the sequence recognition element had a dramatic effect on the fluorescence properties of these ligands upon DNA binding.



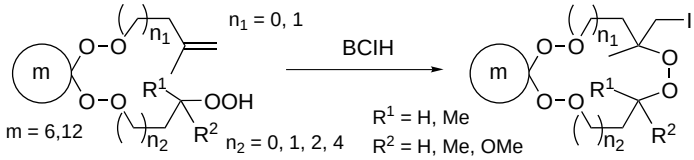
The synthesis and crystal structure analysis of novel macrocyclic peroxides

Tetrahedron Letters 42 (2001) 5529

Kevin J. McCullough,[a,*] Toyonari Ito,[b] Takahiro Tokuyasu,[b] Araki Masuyama[b] and Masatomo Nojima[b]

[a]*Department of Chemistry, Heriot Watt University, Edinburgh EH14 4AS, Scotland, UK*
[b]*Department of Materials Chemistry, Faculty of Engineering, Osaka University, Suita, Osaka 565-0871, Japan*

BCIH-mediated cyclization of unsaturated hydroperoxides results in the formation of a series of macrocyclic triperoxides with ring sizes in the range 11–16.



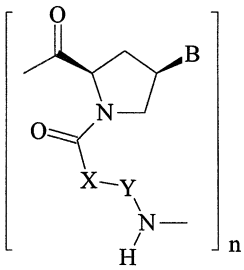
Synthesis and properties of novel pyrrolidinyl PNA carrying β-amino acid spacers

Tetrahedron Letters 42 (2001) 5533

Tirayut Vilaivan,[a,*] Chaturong Suparpprom,[a] Pongchai Harnyuttanakorn[b] and Gordon Lowe[c]

[a]*Organic Synthesis Research Unit, Department of Chemistry, Faculty of Science, Chulalongkorn University, Phayathai Road, Patumwan, Bangkok 10330, Thailand*
[b]*Department of Biology, Faculty of Science, Chulalongkorn University, Phayathai Road, Patumwan, Bangkok 10330, Thailand*
[c]*Dyson Perrins Laboratory, Department of Chemistry, Oxford University, South Parks Road, Oxford, OX1 3QY, UK*

Novel pyrrolidinyl peptide nucleic acids bearing β-amino acid spacers have been synthesized and their binding to complementary oligonucleotides studied by gel electrophoresis.



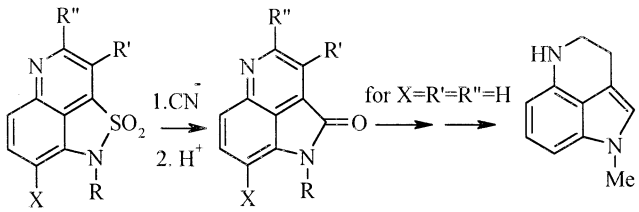
Transformation of 2,2-dioxoisothiazolo[5,4,3-*d*,*e*]quinolines to pyrrolo[4,3,2-*d*,*e*]quinolin-2(1*H*)-ones

Tetrahedron Letters 42 (2001) 5537

Zbigniew Wróbel

Institute of Organic Chemistry, Polish Academy of Sciences, ul. Kasprzaka 44/52, 01-224 Warsaw, Poland

The conversion of 2,2-dioxoisothiazolo[5,4,3-*d*,*e*]quinolines to pyrrolo[4,3,2-*d*,*e*]quinolin-2(1*H*)-ones is described. Further transformation to a pyrrolo[4,3,2-*d*,*e*]quinoline system, a backbone of a number of marine alkaloids was performed on one example.



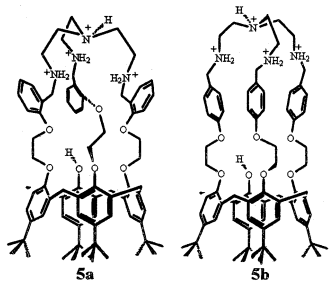
Aza crown ether calix[4]arenes containing cation and anion binding sites: effects of metal ions towards anion binding ability

Tetrahedron Letters 42 (2001) 5541

Thawatchai Tuntulani,[a,*] Sirilux Poompradub,[a] Praput Thavornyutikarn,[a] Nongnuj Jaiboon,[a] Vithaya Ruangpornvisuti,[a] Narongsak Chaichit,[b] Zouhair Asfari[c] and Jacques Vicens[c]

[a]*Department of Chemistry, Faculty of Science, Chulalongkorn University, Bangkok 10330, Thailand*
[b]*Department of Physics, Faculty of Science, Thammasat University at Rangsit, Pathumthani 12121, Thailand*
[c]*ECPM, Group de Chimie des Interactions Moléculaires Spécifiques, associé au CNRS, 25, rue Becquerel, F-67087 Strasbourg Cedex 2, France*

Compounds **5a** and **5b** were synthesized and their complexation with halide anions in the presence of various countercations was studied by ^{1}H NMR titrations.

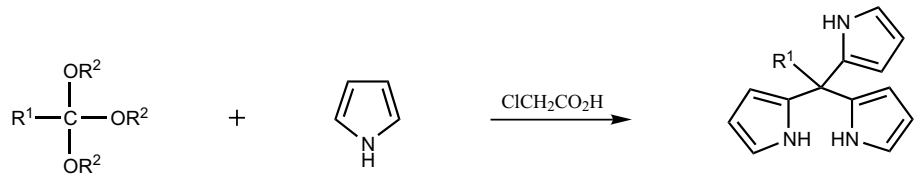


Tetrahedron Letters 42 (2001) 5545

Reactions between pyrrole and orthoesters: preparation of tri-(pyrrol-2-yl)alkanes

Colin B. Reese* and Hongbin Yan

Department of Chemistry, King's College London, Strand, London WC2R 2LS, UK



R^1 = H, Me, Et

Tetrahedron Letters 42 (2001) 5549

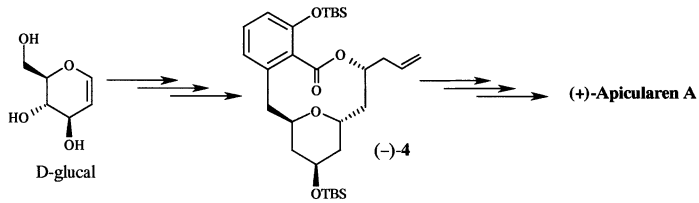
Carbohydrate-based routes to salicylate natural products: formal total synthesis of (+)-apicularen A from D-glucal

Arwel Lewis,[a] Ian Stefanuti,[a] Simon A. Swain,[a] Stephen A. Smith[b] and Richard J. K. Taylor[a,*]

[a]*Department of Chemistry, University of York, Heslington, York YO10 5DD, UK*

[b]*GlaxoSmithKline, New Frontiers Science Park, Harlow, Essex CM19 5AW, UK*

A synthesis of apicularen analogue (−)-**4** in 18 steps from D-glucal is reported. As (+)-**4** has been converted into apicularen A in 8 steps, this constitutes a formal total synthesis of this potent, naturally occurring anti-cancer agent.

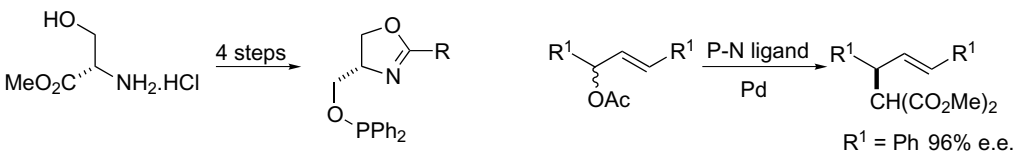


Tetrahedron Letters 42 (2001) 5553

Simple phosphinite–oxazoline ligands for asymmetric catalysis

Geraint Jones and Christopher J. Richards*

Department of Chemistry, Cardiff University, PO Box 912, Cardiff CF10 3TB, UK



R^1 = Ph 96% e.e.

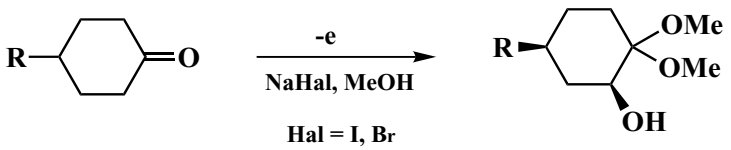
R^1 = Me 70% e.e.

Tetrahedron Letters 42 (2001) 5557

Stereoselective electrochemical transformation of 4-substituted cyclohexanones into *cis*-5-substituted-2,2-dimethoxycyclohexanols

Michail N. Elinson,* Sergey K. Feducovich, Dmitry E. Dmitriev, Alexander S. Dorofeev, Anatolii N. Vereshchagin and Gennady I. Nikishin

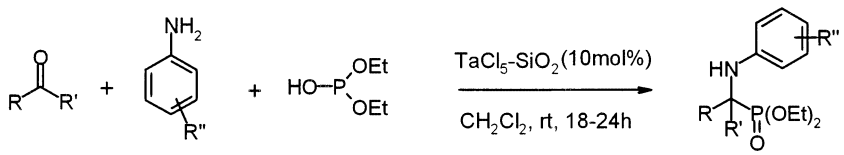
N.D. Zelinsky Institute of Organic Chemistry, Leninsky prospect 47, 119991 Moscow B-334, Russia



Three component coupling catalyzed by $TaCl_5$–SiO_2: synthesis of α-amino phosphonates

Tetrahedron Letters 42 (2001) 5561

S. Chandrasekhar,* S. Jaya Prakash, V. Jagadeshwar and Ch. Narsihmulu
Indian Institute of Chemical Technology, Hyderabad 500 007, India



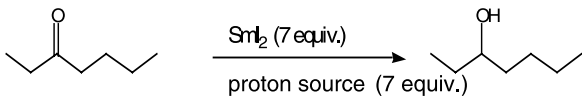
R = alkyl, aryl; R' = H, alkyl; R''= H, NO_2, OMe, OH, F.

Chelating alcohols accelerate the samarium diiodide mediated reduction of 3-heptanone

Tetrahedron Letters 42 (2001) 5565

Anders Dahlén and Göran Hilmersson*
Organic Chemistry, Department of Chemistry, Göteborg University, SE-412 96 Göteborg, Sweden

The SmI_2-mediated reduction of heptanone to heptanol is accelerated 255 times by the addition of di(ethylene glycol). The number of ether oxygens in the proton source are crucial for the observed increase in rate.

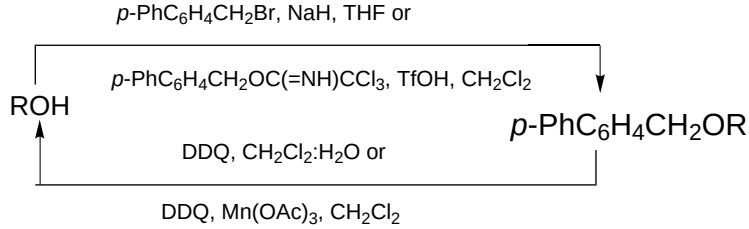


Development of *p*-phenylbenzyl as a new protecting group: protection and deprotection of alcohols

Tetrahedron Letters 42 (2001) 5571

G. V. M. Sharma* and Rakesh
D-211, Discovery Laboratory, Organic Chemistry Division III, Indian Institute of Chemical Technology, Hyderabad 500 007, India

p-Phenylbenzyl (PPB) is developed as a new protecting group for alcohols and deprotected oxidatively with DDQ.

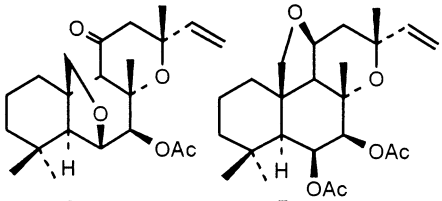


Hypoiodite reactions of 1,9-dideoxyforskolin and its 6-acetyl-11-deoxo-11β-hydroxy derivative

Tetrahedron Letters 42 (2001) 5575

H. Gurulingappa and Sujata V. Bhat*
Department of Chemistry, Indian Institute of Technology-Bombay, Powai, Mumbai 400076, India

Hypoiodite reactions of 1,9-dideoxyforskolin and its 6-acetyl-11-deoxo-11β-hydroxy derivative gave the corresponding C-20 oxido derivatives **9** and **5**, respectively.

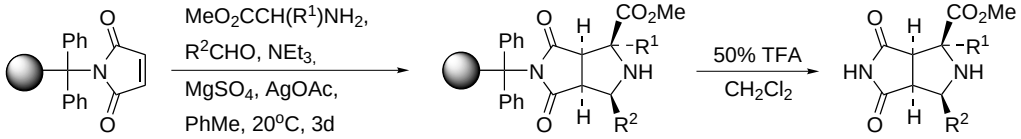


Pyrrolidine synthesis on polystyrene supports: development of a 'one-pot' dipolar cycloaddition strategy

Tetrahedron Letters 42 (2001) 5579

Anthony G. M. Barrett,[a,*] Raymond J. Boffey,[a] Mathias U. Frederiksen,[a] Christopher G. Newton[b] and Richard S. Roberts[a]

[a]*Department of Chemistry, Imperial College of Science, Technology and Medicine, South Kensington, London SW7 2AY, UK*
[b]*Aventis Pharma, Dagenham Research Centre, Rainham Road South, Dagenham, Essex RM10 7XS, UK*



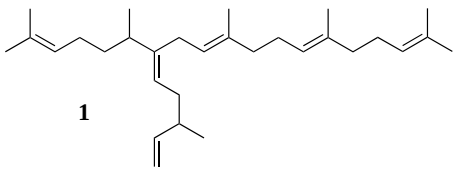
Structural characterisation of C_{30} highly branched isoprenoid alkenes (rhizenes) in the marine diatom *Rhizosolenia setigera*

Tetrahedron Letters 42 (2001) 5583

Simon T. Belt,[a,*] W. Guy Allard,[a] Guillaume Massé,[a,b] Jean-Michel Robert[b] and Steven J. Rowland[a]

[a]*Petroleum and Environmental Geochemistry Group, Department of Environmental Sciences, University of Plymouth, Drake Circus, Plymouth PL4 8AA, Devon, UK*
[b]*ISOMer, Faculté des Sciences et des Techniques, Université de Nantes, 2 Rue de la Houssinière, 44027 Nantes Cedex 3, France*

Four C_{30} HBI alkenes (including **1**) have been isolated from the marine diatom *Rhizosolenia setigera* and characterised by NMR spectroscopy.



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